



Environmental Assessment
National Petroleum Reserve-Alaska
NPR-A Permit Amendment
2010
DOI-BLM-LLAK010-2010-0038-EA
University of Alaska Museum
Preparing Office: Arctic Field Office

Project Title/Type of Action: **National Petroleum Reserve-Alaska (NPR-A) Permit**

Case File Number: **FF095351**

Land Use Plans: **Northeast National Petroleum Reserve-Alaska Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) 2008**
Colville River Special Area Management Plan (CRSAMP) approved July 2008
The National Petroleum Reserves Production Act of 1976

Applicant: **University of Alaska Museum**
Patrick Druckenmiller, PhD

Address: **University of Alaska Fairbanks**
907 Yukon Drive
P.O. Box 756960
Fairbanks, Alaska 99775

Date: **July 22, 2010**

Lands Involved:

Land Description (BLM Managed Lands)

Legal Description (All Umiat Meridian)

Township	Range	Section	Comments
9 North	3 East	31,32	Excluding Private Lands
9 North	2 East	35,36	Excluding Private Lands
8 North	2 East	2,11,14,15,22,23,27,34	Excluding Private Lands

Environmental Assessment

**for a NPR-A Permit Amendment
DOI-BLM-LLAK010-2010-0038-EA**

This Environmental Assessment (EA) has been prepared to meet requirements of the National Environmental Policy Act (NEPA), and to support U.S. Department of Interior (USDOI) Bureau of Land Management (BLM) decision-making on permits required to construct and implement the proposed project. The scope of this EA includes analysis of the effects of the proposed activity and alternatives.

Impacts of this type of activity have been evaluated in the referenced planning documents.

Chapter 1 Introduction

Dr. Patrick Druckenmiller of University of Alaska Museum (UAM), Fairbanks, Alaska has requested an amendment to his current authorization to utilize public lands for the purpose of conducting paleontological excavations. The amendment request is to add additional lands to the current permit at the Liscomb Bonebed along the Colville River. The current authorization expiration date of December 31, 2011 would not change.

1.1 Purpose and Need

The BLM's organic act, the Federal Land Policy and Management Act of 1976 (FLMPA) (43 USC 1701), requires that the agency provide for multiple uses of the public lands. A permit issued by the BLM is needed to provide guidelines to ensure that the resources on BLM managed lands are conserved and to minimize environmental impacts from the proposed action. The purpose of the proposed action is to allow UAM to conduct paleontological excavations, excavating fossils underground, within the zone of permafrost which is unique in the history of dinosaur excavation on earth.

1.2 Laws, regulations, other EAs that influence this EA

This EA will be based on the findings, management controls, and protective measures of the Northeast National Petroleum Reserve-Alaska Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) 2008, and the Colville River Special Area Management Plan (CRSAMP) approved July 2008

The action, as proposed, is consistent with the objectives outlined in these documents and not in conflict with other resources in the area. The proposed use is in conformance with current policy of the BLM Arctic Field Office. The proposed action is in conformance with the National Petroleum Reserve Product Act (NPRPA), FLPMA, Alaska National Interest Lands Conservation Act (ANILCA), Endangered Species Act, Executive Orders (EO) 11988, and EO 11990.

1.3 The Decision to be Made

The BLM must conduct a project-specific NEPA analysis and determine whether the proposed project should be approved, rejected, or approved with modifications, and if additional mitigation is needed. This EA will be based on the findings, management controls, and protective measures of the Northeast National Petroleum Reserve-Alaska Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) 2008 and the Colville River Special Area Management Plan (CRSAMP) approved July 2008 and RODs, as well as other laws and regulations. The scope of this EA includes analysis that enables the BLM to select among alternatives that meet the purpose and need, and are within the BLM's jurisdiction (40 Code of Federal Regulations 1506.1(a) (2)).

1.4 Scoping and Issues

The proposed action was announced on the BLM Arctic Field Office website NEPA register July 16, 2010. To date no comments have been received.

BLM guidelines define environmental issues as points of disagreement, debate, or dispute resulting from the proposed action (BLM NEPA Handbook, H-1790-1, 2008). Issues are

identified through internal and external scoping through a process of considering environmental effects of the proposed action. Some elements are not present in the project area and are, therefore, not discussed further. A summary listing of related issues considered by AFO Field Staff is provided in **Table 1.1**.

Table 1.1 Issues Considered in Evaluating Impacts

Resources/Environmental Considerations for Issues and Analysis	Determination	Basis of Determination (See Note)
ACEC's	Not Present	
Air Quality	Minimally Impacted	Protection provided by: State of Alaska Air Non-Point and Mobile Program and regulations (18 AAC 50)
Cultural and Paleontological Resources	Minimally Impacted	Protection provided by: Section 106 of the National Historic Preservation Act, Non Oil and Gas Permit Stipulations VA, & VB.
Environmental Justice	Not Present	Protection provided by: EO 12898
Fish	Minimally Impacted	Protection provided by: Non Oil & Gas Permit Stipulations IIA, IIB, VIIIA, and XI. EFH finding "not likely to adversely affect".
Flood Plains/Wetlands and Riparian Zones	Minimally Impacted	Protections provided by: EO 11988 and EO 11990
Invasive, Non-native species	Not Present	Protections provided by: not applicable to this action
Native American Religious Concerns	Not Present	
Recreation	Not Present	
Socialcultural Systems	Not Present	
Subsistence	Minimally Impacted	Protection provided by: ANILCA
Threatened & Endangered Species Spectacled and Steller's eider	Not Present	Protection provided by Section 7 of the Endangered Species Act. (J),
Threatened & Endangered Species Polar Bear	Not Present	In accordance with Section 7 of the Endangered Species Act of 1973, as amended (ESA)
Non threatened and endangered birds	Potentially Affected	Protection provided Non Oil and Gas Permit Stipulations III.A, III.B, XII.C Project Specific Stipulations 1 – 4 and Raptor Code of Conduct
Non threatened and endangered mammals	Minimally Impacted	Protection provided by Non Oil and Gas Permit Stipulations III. A, III.D, XI.B.1, XII.A, XII.B, XII.G
Vegetation	Minimally Impacted	Protections provided by: Non Oil and Gas Permit Stipulation X.A.
Visual Resource Management	Minimally Impacted	Protection provided by: VIIA, XIA,XIB, IV, VII.A
Water Resources	Minimally Impacted	Protections provided by: Non Oil and Gas Permit Stipulation II.
Waste (Hazardous/Solid)	Minimally Impacted	Protections provided by State of Alaska 18 AAC 30, 60, 62, 63, 72, and 75

Table 1.1 Issues Considered in Evaluating Impacts

Resources/Environmental Considerations for Issues and Analysis	Determination	Basis of Determination (See Note)
Wild & Scenic Rivers	Not Present	
Wilderness	Minimally Impacted	Protection provided by: Non Oil & Gas Permit Stipulations IV.A. IVC. VIII A., X, XI.
<p>Key to Table 1.1: BLM – Bureau of Land Management EFH – Essential Fish Habitat Potentially Affected: The proposed action or alternative could result in potential impacts to resource or issues to the level that additional mitigation may be required, or there is a need to evaluate potentially significant issues.</p> <p>Minimally Impacted: Resources or issues would not be affected to a degree requiring further analysis because either the expected impacts from the proposed action and alternative would be minimal, or standard protections (e.g., ROPs and Stipulations from overriding BLM plans or other legal protections) would reduce impacts. Minimally impacted resources or issues will not be analyzed further in this EA.</p> <p>Not Present: Resources or issues are not expected to be affected by the proposed action or alternatives because activities would occur at a different time or place. Resource or issues not present will not be analyzed further in the EA.</p>		

In summary, BLM resource specialists have identified the following issue for further evaluation in this EA: Non threatened and endangered birds.

1.5 Public Involvement

Public notification of the Environmental analysis was announced in the NEPA register on file at the Arctic Field Office Environmental Assessment web site beginning July 16, 2010. No public comments or inquiries were received.

Chapter 2 Alternatives Including the Proposed Action

2.1 Introduction

This section describes the alternatives considered, including the no action and proposed action.

2.2 Description of Alternatives

2.2.1 Alternative A: No Action

Under no action, the BLM would not grant an amendment to UAMs current NPR-A permit to conduct paleontological work on additional lands in northeast NPR-A. Current land management situation and activities would continue but access and activities related to those requested by the proponents would not occur. Such activities include research and monitoring, recreation, subsistence, and travel.

2.2.2 Alternative B: Proposed Action

The objective of the proposed action is to conduct paleontological excavations at the Liscomb Bonebed along the Colville River in the vicinity of Ocean Point, North Slope, Alaska. Exposures of upper Lower to Upper Cretaceous sedimentary rocks crop out extensively along river-cut bluffs of the Colville River. The purpose of the proposed fieldwork is to undertake field reconnaissance to locate new sites and new material from excavations. The applicant would prospect exposures along the Colville River, between Umiat and Ocean Point, to locate new specimens of vertebrates, invertebrates, and plant remains from outcrops that can be safely explored by foot and from the gravel bars along the river where eroded material has accumulated. UAM does not propose any large scale excavations during the field survey. They would identify new localities that might be worth a return visit to fully document the site.

Field camps would be established daily or as often as is deemed necessary, during the float down river. No camp would be located at the same location for more than two weeks. The majority of the proposed camp sites would be on state lands. Daily field reconnaissance would be conducted by foot and would consist of prospecting on outcrops for vertebrate or other fossil remains. They would explore from river level up to the top of the outcrops, while being limited by areas that are safe.

If a site with a vertebrate fossil is located, the material exposed on the ground surface would be collected and a limited amount of surface brushing and excavation (not more than one meter, by one meter, by one meter in size) would be done to determine the amount and extent of the material in the horizon. If the specimen continues into the rock and more extensive excavation is required, an appropriate BLM representative would be contacted as soon as is practical before any other work occurred.

The timeframe of the proposed action is August 5th – 25th, 2010, with possible weather adjustments. There are anticipated to be six or seven people conducting the work. The field camp location would be accessed by a fixed wing airplane from Prudhoe Bay. At the Colville River transportation to and from the sites would be on foot and by boat with a 30 horsepower outboard motor. A helicopter might be requested to assist in removal of fossil material or landing one or two crew members.

There would be less than 50 gallons of fuel for the entire project. A small portion of fuel would stay at camp and the rest would be transported to and from the adit either by hand or by boat.

Chapter 3 Affected Environment

The affected environment for the area of the Proposed Action is discussed in the following documents: (1) Northeast National Petroleum Reserve-Alaska Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) 2008 and (2) Colville River Special Area.

Based on the proposed project and the issues analysis in Section 1.5, the following discussion of the affected environment covers non threatened and endangered birds.

3.1.1 Issue 1 Non Threatened and Endangered Birds

The activity proposed in this EA is to take place within the Colville River Special Area (CRSA). This area was given special status in the National Petroleum Reserve Production Act of 1976 in order to protect the arctic peregrine falcon (which was a federally listed species at that time). The Colville River is known as a world class nesting area for peregrine falcons and BLM has demonstrated and continues to demonstrate an attitude of protection for this species by placing it on the BLM Alaska Special Status Species List after it was de-listed from the Federal Endangered Species List.

The arctic peregrine falcon (*Falco peregrinus tundrius*) is one of three subspecies of peregrine falcons that occur in Alaska. Arctic peregrine falcons migrate into Alaska each year and breed north of the Brooks Range and on the Seward Peninsula. Arctic peregrine falcons are highly migratory and winter from the southern United States south to Argentina. Approximately 250 pairs of arctic peregrine falcons nest in Alaska each year.

The CRSA provides the North Slope's single most important raptor nesting habitat area with high proportions of the region's populations of arctic peregrine falcon, as well as other raptors such as gyrfalcon (*Falco rusticolus*) and rough-legged hawk (*Buteo lagopus*). The birds occupy bluffs and cliffs within its boundaries.

The arctic peregrine falcon population in the Colville River drainage has been monitored since the early 1950s and the initial surveys documented the widespread distribution and abundance of these birds. Subsequent monitoring efforts were sporadic until 1978, after which surveys were conducted yearly through 2003 and then again in 2005. This valuable dataset has documented the decline and recovery of this species along the Colville River, from a low of 14 pairs detected in 1973 and a high of 62 pairs in 1998. Population trends, in terms of occupancy (number of pairs attempting to breed each year), for arctic peregrine falcons along the Colville River have been increasing or stable since 1980.

Peregrine falcons in the CRSA are typically found on cliffs adjacent to rivers where they use ledges and platforms on rocky outcroppings, brinks of cliffs, or on the nose of a steep earth bluff, and occasionally in old nests built by rough-legged hawks. Data from 80 arctic peregrine falcon nests in the CRSA from 1967 – 1969, indicated the birds selected nest sites that averaged 116 feet above the river (range 30 – 400 feet), 33 feet (range 0 – 150 feet) below the cliff brink, and 54 feet (range 0 – 300 feet) above the cliff base.

The BLM's objective to maintain that population into the future and the agency issues permits to a variety of agencies, universities, and organizations to conduct scientific studies in the CRSA, including on cliffs occupied by arctic peregrine falcons. The arctic peregrine falcon can be susceptible to disturbance by humans on foot.

Chapter 4 Environmental Impacts

Because the proposed activities are not substantially different from those previously evaluated, and because no significant new scientific information or analyses have been developed since the most recent related evaluation (i.e., May 2008), this NEPA analysis will focus on impacts due to the project-specific/site-specific differences of the proposed action.

4.1 Direct and Indirect Effects

Analysis of impacts from the proposed action and no action alternative is based on observations and scientific information gained from decades of similar operations on the North Slope and other Arctic regions. The proposed activities are not substantially different from those previously evaluated in the Final Environmental Impact Statement on Oil and Gas Leasing in The National Petroleum Reserve in Alaska (Section IV), the CRSAMP (Chapter 4) and analyses from these documents are incorporated by reference.

Issues specifically identified in Section 1.4 for further analysis in this EA are discussed below.

4.1.1 Issue 1 Non Threatened and Endangered Birds

4.1.1.1 No Action Alternative

The potential for impact to non threatened and endangered birds would be minimal under the no action alternative; there would be no change from the current management situation in which no human visits to cliff faces is allowed.

4.1.1.2 Proposed Action

The potential for impact to non threatened and endangered birds would be increased under the Proposed Action compared to the No Action Alternative. The proposed action requires researchers to work on cliff faces that may contain raptor nests. Raptors are known to be sensitive to the presence of human near their nests while they are rearing young.

A study conducted in 1985 and 1986 demonstrated that response of nesting peregrine falcons to humans varied with distance between the human and the falcon. The most severe reactions occurred when activities were near or above the nest, such as could be expected from recreational activities, subsistence hunting, falconry, geological, paleontological, archeological, and fish and wildlife fieldwork. In addition, a study of peregrine falcons on the Tanana River documented that nesting success during incubation and chick brooding could be disproportionately affected by factors like disturbance. The authors also showed that disturbance may shift activities away for thermoregulation of eggs and young chicks and towards territorial defense. These two studies clearly show that human presence in the vicinity of a peregrine nest site elicits severe reactions from the birds and may lead to decreased nest success.

The proposed action could affect cliff nesting raptors through disturbance, resulting in loss of chicks due to adult preoccupation with disturbance events thus causing neglect of chicks. Nevertheless, because of the timing of the proposed action (August 5 – 25), combined with implementation of General Stipulations, Project Specific Stipulations, and the Raptor Code of Conduct, impacts to Peregrine Falcons and other raptors are expected to be minor.

4.2 Cumulative Effects

Cumulative impacts result from the incremental addition of past, present, and reasonably foreseeable actions. Each action may be individually minor by itself, but when added to others could become significant over a period of time.

The time frame for the proposed action for the NPR-A portion of the project area is 1977 (designation of NPR-A) to 10 years into the future, assuming that the relatively low level of activity and management would remain at about the same level as present. Due to the limited scope and intensity of the proposed action the geographic area would be limited within 10 miles of the proposed river travel corridor, camps, and staging areas.

Due to the remoteness of the areas, the activity levels are limited by available transportation. Additional activities include other research and monitoring projects, recreationist (including aircraft and float trips), subsistence, and other activities from non oil and gas as well as oil and gas.

4.2.1 Issue 1 Non Threatened and Endangered Birds

Considering the size of the area under consideration the level activity from recreation, research, subsistence, and other actions in the area is minimal. The proposed action is anticipated to have very little if any impact as all the applicants will be adhering to protective measures.

The proposed action is not anticipated to result in cumulative impacts due to the remoteness of the portion of the NPR-A where the activity would occur (and low levels of disturbance), the short-term time frame of the proposed action, the timing of the activities, in addition to mitigating stipulations imposed on the project. Disturbance rates from the proposed action would be slightly higher than the no action alternative, but not enough to cause a discernable effect to the raptor population along the Colville River.

4.3 RESIDUAL EFFECTS

Even with compliance with the required protections, the proposed action could result in minor impacts to individual peregrine falcon or raptor nests but impacts are not likely result in population-level effects.

4.4 MITIGATION AND MONITORING

The stipulations for the proposed action are a subset of: The *Northeast National Petroleum Reserve-Alaska Supplemental Integrated Activity Plan/ Final Environmental Impact Statement Record of Decision Required Operating Procedures*, the *Northwest National Petroleum Reserve-Alaska Integrated Activity Plan/ Final Environmental Impact Statement Record of Decision Required Operating Procedures*, *Utility Corridor Resource Management Plan/Final Environmental Impact Statement*, *The Colville River Special Area Management Plan*, and the *Final Environmental Impact Statement on Oil and Gas Leasing in The National Petroleum Reserve in Alaska and Record of Decision* approved 5/1983, and project specific stipulations developed in the NEPA process:

1. Access to cliff faces is allowed only for prospecting on outcrops for vertebrate or other fossil remains. The cliffs may be accessed by foot from river level up to the top of the outcrops, while being limited by the following stipulations:
 - 1a. No more than 3 visits shall be made to any cliff over the entire period of the field work (see exception in Stipulation 1e).
 - 1b. For intensive, multi-day work at individual sites within 500 m of raptor nests, plan each work day to be broken into two segments with a few hours break in the middle.
 - 1c. Raptor eggs, or nestlings too young to thermoregulate, are sensitive to temperature extremes when left unattended by adults. Eggs are especially sensitive to heat, and incubating adults should not be kept from the nest on hot days. Nestlings

- unable to thermoregulate are sensitive to both temperature extremes, especially cold. During cold, wet weather at any time of the summer, adults should not be kept off nests; leave an area if your presence has that effect
- 1d. Researchers shall approach cliffs from the most visible avenue, beginning up to one mile (1.6 kilometers), so that raptors may see and hear the approach at a distance. Except where access from the bottom is impossible, the researchers shall approach cliffs from the base and work upwards on rock exposures.
- 1e. Where raptor nests are detected, work shall be limited to within 500m of nests and to a single visit. The applicant should maintain a flexible schedule, visiting occupied cliffs only on good weather days.
- 1f. If a nest is located, the site shall not be visited.
- 1g. No camp sites shall be established on cliffs, camps must be at river level and must be located greater than 500 meters from any active raptor nest site.
2. Project lead must contact BLM at least 60 days prior to accessing the project area in order to be updated on raptor nests in the project area. If active nests are present in the area limitations on distances between camp sites and raptor nests may be imposed.
 3. No activity shall commence at this site until August 5, during each year of the permit.
 4. Attached Raptor Code of Conduct shall be adhered to.

4.5 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

The potential issues that were identified in the evaluation of the proposed action for this EA were Non threatened and endangered Birds. The analysis found that impacts would be short term and localized and that mitigation measures would adequately reduce any adverse effects to identified issues in the area. Likewise, the analysis also found that mitigation measures would adequately reduce any adverse effects to non threatened and endangered birds, which would also be short term and localized. The proposed action would not contribute to significant cumulative effects to non threatened and endangered birds.

Chapter 5 Consultation and Coordination

5.1 Agencies, Organization, Persons Consulted

Public notification of the Environmental analysis will be on file at the Arctic Field Office and available on the Arctic Field Office Environmental Assessment web site.

5.3 List of Preparers

BLM

Arctic Field Office:

Dave Yokel, Wildlife Biologist

Michael Kunz, Archaeologist

Susan Flora, Environmental Scientist

Richard Kemnitz, Hydrologist

Donna Wixon, Natural Resource Specialist

Debbie Nigro, Wildlife Biologist

Matthew Whitman, Fisheries Biologist

Stacey Fritz, Anthropologist/Subsistence Specialist

Roger Sayre, NEPA Specialist

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2930.00

Finding of No Significant Impact

Type of Action: NPR-A Permit

Serial Number: FF095351

Environmental Assessment Number: DOI-BLM-LLAKF010-2010-0038-EA

Applicant: University of Alaska Museum
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District: Arctic Field Office

Planning Unit: Northeast National Petroleum Reserve-Alaska Supplemental
Integrated Activity Plan/Environmental Impact Statement (IAP/EIS)
2008
Colville River Special Area Management Plan (CRSAMP) approved
July 2008

Lands Involved: Sec 31, 32 T. 9N, R. 3E, Umiat
Sec 35,36, T.9N, R2E, Umiat
Sec 2,11,14,15,22,23,27,34, T.8N,R2E, Umiat

Context and Intensity of Environmental Impacts

Based upon a review of the EA prepared by the Arctic Field Office and the supporting documents, I have determined that the proposed action will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the

general area. No environmental effects meet the definition of significance as defined at 40 CFR 1508.27. Therefore, an environmental impact statement is not required. We reviewed the context of the proposed action and found that it would not result in any significant effects to resources and values in NPR-A. The mitigation measures and environmental protections would ensure that the Proposed Action would not add significantly to incremental impacts.

The following factors were considered in the EA to evaluate the significance of this proposal (40 CFR 1508.27): Beneficial and adverse impacts; effects on public health and safety; unique cultural or ecological areas within or near the project area; potentially controversial or uncertain effects; whether the action may establish a precedent for future actions with significant effect; cumulative effects; adverse impacts to important scientific, cultural or historical resources; effects to endangered or threatened species or habitat; or whether the action threatens a violation of federal, state, local or tribal law, regulation or policy imposed for the protection of the environment, where non-federal requirements are consistent with federal requirements:

Monitoring and Mitigation

BLM will monitor on the ground activities periodically. Mitigation measures will be implemented as described in the attached authorization stipulations.

APPROVED:

/s/Lon Kelly
Arctic Field Office Manager

7/22/2010

Date